

REMARKS

In the Office Action mailed January 30, 2009, the Examiner rejoined claims 1-4 and 6-10. By way of the present amendment, claims 1, 6, 7, and 9-12 are amended, claims 2, 3 and 8 are cancelled, and no new claims are added. Claims 5 and 13-15 were previously cancelled and claims 16-21 were previously withdrawn in response to a previous restriction requirement. As such, claims 1, 4, 6, 7, 9-12, and 16-21 are pending, with claims 1, 4, 6, 7, and 9-12 presented for prosecution and claims 16-21 currently withdrawn from consideration.

Amendment to the Specification

In the Preliminary Amendment filed August 3, 2006, Applicants requested amendments to the specification relating to headings in the specification. Some of Applicants' requested amendments were reflected in the Patent Application Publication US 2007/0143873, but other requested amendments, while not objected to, were not reflected in this publication. As such, the previously requested amendments that were not included US 2007/0143873 are again respectfully requested by Applicants in the present amendment with appropriate reference to the page and line numbering.

Applicants also respectfully request in the present amendment that the location of the previous "Figures" section be relocated to page 7, between lines 5 and 6, and that the heading be amended to "BRIEF DESCRIPTION OF THE DRAWINGS," both of which to closely conform to customary U.S. practice.

Amendment to Sequence Listing

Applicants thank the Examiner for the courtesy extended to its undersigned representative on May 20, 2009 and again on June 29, 2009 to address an error in Sequence ID No. 1 in the previously submitted sequence listing.

Substitute sheets for the Sequence Listing are enclosed herewith. As indicated in the declaration of named inventor Hervé Sentenac and the supporting evidence of possession, which is enclosed herewith, the correct sequence code for the VvSOR gene in *Vitis vinifera*, which encodes a new outward rectifier potassium channel, was in the possession of the inventors at the time the patent application was filed. The previous sequence listing for Sequence ID No. 1 unintentionally contained the wrong sequence code, as the wrong sequence code in the Sequence Listing was for the VvSIRK gene from *Vitis vinifera* – the VvSIRK cDNA sequence (2376 bases) codes for the inward rectifier potassium channel VvSIRK. The specification as filed, however, discloses a sequence encoding outward rectifier potassium channel of *Vitis vinifera* (VvSOR). (See, e.g., Specification at p. 17, lines 10-21; p. 18 line 30 to p. 19 line 12.) One of ordinary skill in the art would not only have recognized the existence of the error in the specification, but also recognized the appropriate correction. As such, the substitute sheets for the correct Sequence Listing do not constitute new matter. *In re Oda*, 443 F.2d 1200, 170 USPQ 268 (CCPA 1971).

Two copies of a replacement compact disc having the correct amended sequence listing are enclosed, and the copies in computer readable form are the same as the substitute copy of the Sequence Listing. As such, the replacement compact discs also do not include new matter. Further, pursuant to 37 CFR 1.825, the replacement compact discs also contain all of the files of the compact disc that was submitted in the October 15, 2008 amendment that are not presently amended by the replacement Sequence Listing.

A separate verified statement under 37 C.F.R. § 1.821(f), 1.825(a) and 1.825(b) is enclosed herewith.

Objections to the Specification

In the Office Action mailed January 30, 2009, objection was made to the Abstract with an emphasis on the abstract generally being limited to a single paragraph. In response to the objection, Applicants have amended the previous two-paragraph abstract such that the narrative form is now a single paragraph within the range of 50 to 150 words. Applicants believe that the Abstract as amended conforms to the proper language and format for an abstract of the disclosure. As such, Applicants respectfully request that the objection to the Abstract be reconsidered and withdrawn.

In the Office Action mailed January 30, 2009 informalities were identified with respect to the specification being translated from a foreign language and Applicants were advised to review the specification for other typographical errors. Applicants believe that any typographical errors as the result of a translation from a foreign language have been corrected by the requested amendments to the specification, including those typographic errors relating to the idiosyncrasies in syntax relating to the English language. As such, Applicants respectfully request that the objections to the disclosure be reconsidered and withdrawn.

In the Office Action mailed January 30, 2009, Applicants' previous requested amendment concerning "Related Applications" was objected to by the Examiner. Applicants have considered and incorporated the concerns of the Examiner's specified objection in the requested amendment above. As such, Applicants respectfully request that the objection to the amendment to the specification be reconsidered and withdrawn as moot in light of the presently requested amendment.

Claim Rejections-35 U.S.C. § 112

In the Office Action mailed January 30, 2009, claims 1, 3, 4 and 7-12 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and

distinctly claim the subject matter which Applicants regard as the invention. Claims 4, 9 and 10 were not specifically addressed but rejected as being indefinite for being dependent from an indefinite claim. In response, Applicants have amended claims 1, 7, 11 and 12 to clarify the presently claimed invention and cancelled claim 3. As such, Applicants respectfully request reconsideration and withdrawal of the rejection in light of the present amendments.

In the Office Action mailed January 30, 2009, claims 1-4 and 6-12 were rejected under 35 U.S.C. § 112, first paragraph, “as failing to comply with the written description requirement,” and “because the specification, while being enabling for a plant transformed with and a method of using a nucleotide sequence encoding an outward potassium channel polypeptide that is encoded by SEQ ID NO: 1, does not reasonably provide enablement for a method of modifying the expression of any gene encoding an outward potassium channel.” In response, Applicants have amended claims 1, 6, 7, 11 and 12 to clarify the presently claimed invention to be directed to *Vitis vinifera* vine. As such, Applicants respectfully request reconsideration and withdrawal of the rejection in light of the present amendments.

Claim Rejections-35 U.S.C. § 102(b)

In the Office Action mailed January 30, 2009, claims 1, 2, 4, 6 and 7 were rejected under 35 U.S.C. § 102(b) as being anticipated by WO 01/45495 A2 to Ishitani et al. In response, Applicants have amended independent claims 1 and 7 to further clarify the presently claimed invention. Applicants respectfully request withdrawal of the rejection, as a *prima facie* case of anticipation has not been established with respect to the claims as amended.

Specifically, Ishitani et al. fails to teach all features of independent claim 1 as amended, from which claims 4 and 6 depend, all features of independent claim 7 as amended, from which

claims 9 and 10 depend. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." MPEP 2131 quoting *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987).

Ishitani et al. addresses the need to improve the response of members of the genus *Physcomitrella* to environmental stresses or damage. To do so, Ishitani et al. discloses a method for modifying the expression of a potassium channel stress related protein (PCSRP) coding nucleic acid, wherein expression of the nucleic acid sequence in the plant results in increased tolerance to environmental stress as compared to a wild type variety of the plant. (Ishitani et al., at p. 3, lines 11-14.) Ishitani et al. identifies the various types of environmental stress as salinity, drought, temperature, metal, chemical, pathogenic and oxidative stresses, or combinations thereof. (*Id.*, at p. 3, lines 22-24.) Ishitani et al. also makes reference to gene families encoding inward-rectifying potassium channels. (*Id.*, at p. 2, lines 24-28.)

As indicated in paragraph 16 of the Office Action, Ishitani et al., however, fails to teach, disclose or suggest a gene encoding a *Vitis vinifera* outward potassium channel. Ishitani et al. also fails to teach, disclose or such a *Vitis vinifera* vine at all, much less the modification of the organic acid composition of a storage organ of a *Vitis vinifera* vine. In the present invention, by modifying the expression of the encoding gene for the outward potassium channel of a *Vitis vinifera* vine, the organoleptic qualities of the storage organ of *Vitis vinifera* vine are improved and the size of the storage organs of *Vitis vinifera* vine may also be influenced. Ishitani et al. does not teach, disclose or suggest the foregoing limitations in the presently claimed invention.

Accordingly, a *prima facie* case of anticipation has not been established. With respect to specific features of claims 4 and 6, depending from independent claim 1, these are not commented on further, as they are presently moot given the above analysis, although Applicant does not acquiesce in the Examiner's position. Applicants respectfully request withdrawal of these rejections.

Claim Rejections-35 U.S.C. § 103(a) – Kieval in view of Bosma

Claims 3 and 8-12 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ishitani et al. in view of Pratelli et al. (2002, Plant Physiology 128: 564:577). In response, Applicants have amended independent claims 7, 11 and 12 to further clarify the presently claimed invention, cancelled dependent claim 3, and corrected the sequence code SEQ ID NO: 1.

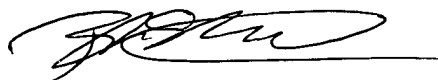
As indicated in paragraph 16 of the Office Action, Ishitani et al. fails to teach, disclose or suggest a gene encoding a *Vitis vinifera* outward potassium channel. However, Pratelli et al. also fails to teach, disclose or suggest a gene encoding a *Vitis vinifera* outward potassium channel. Because of Applicants' unintentional mistake concerning the previously submitted SEQ ID NO: 1, the Examiner relied upon Pratelli et al. for the proposition that it taught a nucleotide sequence encoding a *Vitis vinifera* outward potassium channel, as the "nucleic acid sequence [in Pratelli et al.] encodes a polypeptide sequence 100% identical to the polypeptide encoded in Applicants' SEQ ID NO: 1." However, as indicated above, Applicants' previously submitted SEQ ID NO: 1 unintentionally contained the wrong sequence code, as the wrong sequence code in the Sequence Listing was for the VvSIRK gene from *Vitis vinifera* – the VvSIRK cDNA sequence (2376 bases) codes for the inward rectifier potassium channel VvSIRK. The replacement Sequence Listing for SEQ ID NO: 1 contains the correct sequence code for the VvSOR gene in *Vitis*

vinifera, which encodes an outward rectifier potassium channel. For at least these reasons, the proposed combination fails to establish a *prima facie* case of obviousness over the claims as amended. As such, withdrawal of said rejection is respectfully requested.

In view of the foregoing, it is submitted that this application is in condition for further review by the Examiner. Favorable consideration and prompt allowance of the application are respectfully requested.

The Examiner is invited to telephone the undersigned if the Examiner believes it would be useful to advance prosecution.

Respectfully submitted,





Brian L. Stender
Registration No. 56,836

Customer No. 24113
Patterson, Thunte, Skaar & Christensen, P.A.
4800 IDS Center
80 South 8th Street
Minneapolis, Minnesota 55402-2100
Telephone: (612) 252-1548

CERTIFICATE OF EXPRESS MAIL

"Express Mail" mailing label number EV675717445US. Date of Deposit: July 29, 2009. I hereby certify that this paper is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR. § 1.10 on the date indicated above and is addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.


Name of Person Making Deposit


Doris Whitcomb